

REMARKS**Regarding the Amendment to the Specification:**

The reference to WO 02/04835 has been updated to identify the corresponding commonly owned U. S. patent. Obviously, no new matter has been introduced by this amendment.

Regarding the Claims in General:

Claims 1-14 remain pending. Minor changes have been made in claims 1-3, 5, 6, and 9-13 to improve the form thereof. New claim 14 has been added to provide applicant with additional protection to which he appears to be entitled in light of the known prior art.

Regarding the Prior Art Rejection:

It is respectfully requested that the outstanding rejection of claims 1-13 as being obvious over Jonnson U. S. Published Patent Application 2003/0173169 in view of Braschler et al. U. S. Patent 3,860,097 (Braschler) be withdrawn. The Examiner is respectfully requested to note that Jonnson has now matured into U. S. Patent 6,918,471 which, on its face, is shown to be commonly owned with the present application. The publication date of the Jonnson application is September 18, 2003, which is later than the priority date (July 3, 2002) of the present application. Jonnson is therefore a reference, if at all, not under 35 U.S.C. 102(a), but only under 35 U.S.C. 102(e). However, since Jonnson and the present application are commonly owned, under 35 U.S.C. 103(c), Jonnson is not an application "by another".

Nevertheless, the underlying published PCT application, WO 02/04835 for the Jonnson patent (WO '835), referred to in the present specification, has a publication date of January 17, 2002, and its significance may properly be considered under 35 U.S.C. 102(a). This document was listed in the IDS filed with the application. Anticipating the Examiner's application of it instead of Jonnson, the pending rejection will be addressed below with reference to WO'835 rather than Jonnson.

As described in the present application, an important feature of the invention is provision of two separate fluid inlet paths for the toroidal space formed within the stator and rotor shells of the brake. The Examiner has acknowledged that this is missing from Jonnson (and perforce from WO

'835), and has attempted to remedy this deficiency by combining it with Braschler. However, with due respect, the Examiner's logic supporting the combination of the references is not valid, and in any case, Braschler does not disclose, teach or suggest a construction for a hydrodynamic brake having a single braking cavity with two separate fluid inlet paths.

To place things in perspective, WO '835 teaches arranging inlets to the toroidal space and use of the different pressures prevailing on different sides of the respective stator blades to facilitate the oil supply to and from the toroidal space. However, as noted in the present application, the arrangement of WO '835 requires a pump dimensioned for rather high pressures and high capacity. Also, as the Examiner has realized, WO '835 does not disclose, teach, or suggest anything about a second oil inlet or about a second oil supply line.

The Examiner essentially contends that Braschler teaches two inlets to a toroidal brake chamber of the type shown in WO'835, and that this is sufficient motivation to provide a second inlet in WO'835 because it would amount only to a "mere duplication of essential working parts". A little thought, however, will reveal that this is an invalid oversimplification. WO'835 has advantages as noted above, but also the disadvantage it requires a pump dimensioned for rather high pressures and high capacity. This entire problem and the attendant complexity are avoided by providing a second inlet and feed line for the braking cavity, as taught in the present invention. There still needs to be a pump, to be sure, but it doesn't have to work as hard. And with the reduced pressure requirement, the chance of leakage is reduced so the construction of the second feed circuit is simplified and the system can be made less costly. These benefits are not obvious, and are not disclosed, taught or suggested in either reference. This is certainly not a mere duplication of essential parts.

Even apart from this, Braschler is mainly concerned with how to stack a number of stator/rotors in a hydraulic brake and how to control oil flow resistance by machining of the rotor and stator instead of adjusting the gap between the stator and rotor during assembly. While Braschler shows, e.g. in Fig. 2, inlet holes 65 drilled in each of the stator blades, these inlet holes are the only inlets and they all receive oil from the same supply behind the stator. There is no second flow path, the outlet of oil from the space is through the gap between the stator and the rotor. Braschler does not teach anything about how the flow of oil is affected by the dimensioning of supply lines and the positioning of the inlets or outlet holes in the stator, which might provide a logical connection with

WO '835. Neither does it teach anything about the possibility to use two supply lines and two different inlets for a single toroidal space.

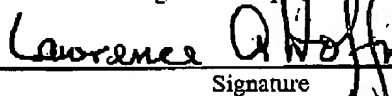
Fig. 3 of Braschler shows a two rotor embodiment, but this isn't helpful either. As described at col. 4, lines 60-65, in this embodiment, there are separate outlets 70 and 70' for the two stator-rotor pairs, and likewise two inlets 72 and 72', but these connect to separate input cavities behind the back surfaces 32 of the respective stator. Again, there is no disclosure, teaching or suggestion of any benefits to be derived from providing a second inlet path and inlet opening for *each* toroidal space.

In short, therefore, what is missing from WO'835 and Braschler, whether considered alone or together, is a disclosure, teaching or suggestion to provide a second inlet path for a single rotor-stator pair, or some other legitimate motivation to do so. In truth, the only motivation for modifying WO'835 as the Examiner proposes is in applicant's own teachings, but it hardly needs to be said that the Examiner can rely on that. Under the circumstances, there is no legitimate basis for the pending rejection, and it should be withdrawn.

In view of the foregoing, favorable reconsideration and allowance of this application are respectfully solicited.

I hereby certify that this correspondence is being transmitted by Facsimile to (571) 273-8300 addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.


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Respectfully submitted,


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